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SEARCH TIME: 00.00.01

55 ANSWERS

L3 55 SEA SSS FUL L1

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FILE COVERS 1967 - 7 Feb 2001 VOL 134 ISS 7
FILE LAST UPDATED: 6 Feb 2001 (20010206/ED)

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=> s l3 full

L4 43 L3

=> s l4 and hypoxia

25173 HYPOXIA
L5 24 L4 AND HYPOXIA

=> s l5 and PET

35377 PET
L6 3 L5 AND PET

=> d l6 1-3 ibib abs hitstr

L6 ANSWER 1 OF 3 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 2000:135450 CAPLUS

DOCUMENT NUMBER: 133:55383

TITLE: Noninvasive detection of tumor **hypoxia** using the 2-nitroimidazole [18F]EF1

AUTHOR(S): Evans, Sydney M.; Kachur, Alexander V.; Shive, Chyng-Yann; Hustinx, Roland; Jenkins, W. Timothy; Shive, Grace G.; Karp, Joel S.; Alavi, Abass; Lord, Edith M.; Dolbier, William R., Jr.; Koch, Cameron J.

CORPORATE SOURCE: Schools of Medicine and Veterinary Medicine, University of Pennsylvania, Philadelphia, PA, USA

SOURCE: J. Nucl. Med. (2000), 41(2), 327-336

CODEN: JNMEAQ; ISSN: 0161-5505

PUBLISHER: Society of Nuclear Medicine, Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The noninvasive assessment of tumor **hypoxia** in vivo is under active investigation because **hypoxia** has been shown to be an important prognostic factor for therapy resistance. Various nuclear medicine imaging modalities are being used, including **PET** imaging of 18F-contg. compds. In this study, we report the development

of

18F-labeled EF1 for noninvasive imaging of **hypoxia**. EF1 is a 3-monofluoro analog of the well-characterized **hypoxia** marker EF5,

2(2-nitro-1H-imidazol-1-yl)-N-(2,2,3,3,3-pentafluoropropyl)acetamide, which has been used to detect **hypoxia** in tumor and nontumor systems using immunohistochem. methods. We have studied 2 rat tumor types: the hypoxic Morris 7777 (Q7) hepatoma and the oxic 9LF glioma tumor, each grown in s.c. sites. **PET** studies were performed using a pharmacol. dose of nonradioactive carrier in addn. to [18F]EF1 to optimize and assess drug biodistribution. After **PET** imaging of the tumor-bearing rats, tissues were obtained for .gamma.-counting of the 18F in various tissues and immunohistochem. detection of intracellular drug adducts in tumors. In one pair of tumors, Eppendorf needle electrode

studies were performed. [18F]EF1 was excreted dominantly through the urinary tract. The tumor-to-muscle (T/M) ratio of [18F]EF1 in the Q7 tumors was 2.7 and 2.4 based on **PET** studies and 2.1, 2.5, and 3.0 based on .gamma.-counting of the tissues (n = 3). In contrast, the T/M ratio of [18F]EF1 in the 9LF glioma tumor was 0.8 and 0.5 based on **PET** studies and 1.0, 1.2, and 1.4 based on .gamma.-counting of the tissues (n = 3). Immunohistochem. anal. of drug adducts for the two

tumor

types agreed with the radioactivity anal. In the Q7 tumor, substantial heterogeneous binding was obsd. throughout the tumor, whereas in the 9LF tumor minimal binding was found. [18F]EF1 is an excellent radiotracer

for

noninvasive imaging of tumor **hypoxia**.

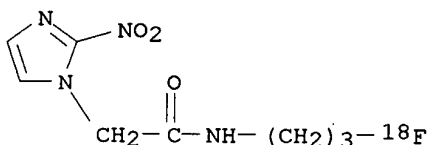
IT 252736-29-1

RL: BPR (Biological process); THU (Therapeutic use); BIOL (Biological study); PROC (Process); USES (Uses)

(detection of tumor **hypoxia** using 2-nitroimidazole [18F]EF1)

RN 252736-29-1 CAPLUS

CN 1H-Imidazole-1-acetamide, N-[3-(fluoro-18F)propyl]-2-nitro- (9CI) (CA INDEX NAME)



REFERENCE COUNT: 40
 REFERENCE(S): (1) Aboagye, E; Anticancer Drug Des 1996, V11, P231 CAPLUS
 (3) Ballinger, J; J Nucl Med 1996, V37, P1023 CAPLUS
 (4) Bialik, S; J Clin Invest 1997, V100, P1363 CAPLUS
 (7) Brown, J; Int J Radiat Oncol Biol Phys 1981, V7, P695 CAPLUS
 (9) Cherif, A; J Drug Target 1996, V4, P31 CAPLUS
 ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1998:622782 CAPLUS

DOCUMENT NUMBER: 129:341244

TITLE: Preclinical development and current status of the fluorinated 2-nitroimidazole **hypoxia** probe N-(2-hydroxy-3,3,3-trifluoropropyl)-2-(2-nitro-1-imidazolyl) acetamide (SR 4554, CRC 94/17): a non-invasive diagnostic probe for the measurement of tumor **hypoxia** by magnetic resonance spectroscopy and imaging, and by positron emission tomography

AUTHOR(S): Aboagye, Eric O.; Kelson, Andrew B.; Tracy, Michael; Workman, Paul

CORPORATE SOURCE: Dep. Radiol.-MR Res., The Johns Hopkins University School of Medicine, Baltimore, MD, 21205, USA

SOURCE: Anti-Cancer Drug Des. (1998), 13(6), 703-730

CODEN: ACDDEA; ISSN: 0266-9536

PUBLISHER: Oxford University Press

DOCUMENT TYPE: Journal; General Review

LANGUAGE: English

AB A review with many refs. **Hypoxia** occurs to a variable extent in a vast majority of rodent and human solid tumors. It results from an inadequate and disorganized tumor vasculature, and hence an impaired oxygen delivery. A probe for the non-invasive detection of tumor **hypoxia** could find important utility in the selection of patients for therapy, with bioreductive agents, anti-angiogenic/anti-vascular therapies and **hypoxia**-targeted gene therapy. In addn., tumor **hypoxia** has been shown to predict for treatment outcome following radio- or chemotherapy in human cancers, the underlying mechanism for which may involve **hypoxia** driving genetic instability and resulting tumor progression. Beyond oncol., utility can also be envisaged in stroke, ischemic heart disease, peripheral vascular disease, arthritis and other disorders. Design, validation, preclin. development and current status of a fluorinated 2-nitroimidazole, N-(2-hydroxy-3,3,3-trifluoropropyl)-2-(2-nitro-1-imidazolyl) acetamide (SR 4554, CRC 94/17), which has been rationally designed for the measurement of tumor **hypoxia** by magnetic resonance spectroscopy (MRS) and imaging (MRI), are reviewed. Application in positron emission tomog. (**PET**) detection is also proposed. Design goals were: (i) a nitro group with appropriate redox potential for selective redn. and binding in hypoxic tumor cells; (ii) hydrophilic/hydrogen bonding character in the side chain to limit nervous tissue penetration and prevent neurotoxicity; and (iii) three equiv. fluorine atoms to enhance MRS/MRI detection, located in a metabolically stable position. Redn. of SR 4554 by mouse liver microsomes

was dependent on oxygen content, with a half-maximal inhibition at 0.48 \pm 0.06%. SR 4554 underwent nitroreductn. by hypoxic but not oxic tumor cells in vitro and electron energy loss spectroscopic anal. showed selective retention in the hypoxic regions of multicellular tumor spheroids. Pharmacokinetic design goals were met. In particular, low brain tissue concns. were seen in contrast to excellent tumor levels, as measured by high performance liq. chromatog. The extent of this restricted entry to brain tumor was surprising given the overall octanol/water partition coeff. and was attributed to the hydrophilic/hydrogen bonding character of the side chain. Quant. MRS was used to assess the retention of ^{19}F signal in murine tumors and human tumor xenografts. The ^{19}F retention index (FRI; ratio of ^{19}F signal levels at

6

h relative to that at 45 min) ranged from 0.5 to 1.0 and 0.2 to 0.9 for murine tumors and human xenografts resp. The correlation between SR 4554 retention and pO_2 was not a linear one, but when FRI was >0.5 , the % pO_2 \pm 5 mmHg was always $>60\%$, indicating that high FRI was assocd.

with

low levels of oxygenation. Finally, whole body ^{19}F -MRI in mice demonstrated that SR 4554 and related metabolites localized mainly in tumor, liver and bladder regions. A selective MRS signal was readily detectable in tumors at doses at least 7-fold lower than those likely to cause toxicity in mice. We conclude that proof of principle is established for the use of SR 4554 as a non-invasive MRS/MRI probe for

the

detection of tumor **hypoxia**. Based on these promising studies, SR 4554 has been selected for clin. development.

IT

167648-73-9P, SR 4554

RL: ADV (Adverse effect, including toxicity); BAC (Biological activity or effector, except adverse); BPR (Biological process); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); PROC (Process); USES (Uses)

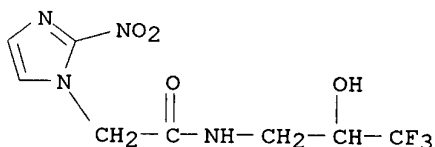
(preclin. development and current status of the fluorinated 2-nitroimidazole **hypoxia** probe SR 4554, a non-invasive diagnostic probe for the measurement of tumor **hypoxia**)

RN

167648-73-9 CAPLUS

CN

1H-Imidazole-1-acetamide, 2-nitro-N-(3,3,3-trifluoro-2-hydroxypropyl)-(9CI) (CA INDEX NAME)



L6 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1996:494670 CAPLUS

DOCUMENT NUMBER: 125:162343

TITLE: Detection of **hypoxia** with reagents containing 2-nitroimidazole compounds and methods of making such reagents

INVENTOR(S): Koch, Cameron J.; Lord, Edith M.

PATENT ASSIGNEE(S): The Trustees of the Univ. of Pennsylvania, USA; The University of Rochester

SOURCE: U.S., 29 pp. Cont.-in-part of U.S. Ser. No. 978,918, abandoned.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5540908	A	19960730	US 1994-286065	19940804
CA 2149770	AA	19940526	CA 1993-2149770	19931118
US 5843404	A	19981201	US 1996-598752	19960208
PRIORITY APPLN. INFO.:			US 1992-978918	19921119
			US 1994-286065	19940804

OTHER SOURCE(S): MARPAT 125:162343

AB Novel nitroarom. compds. and immunogenic conjugates comprising a novel nitroarom. compd. and a carrier protein are disclosed. The invention further presents monoclonal antibodies highly specific for the claimed nitroarom. compds., protein conjugates of the compds., reductive byproducts of the compds., and adducts formed between the compds. and mammalian hypoxic cell tissue proteins. The invention is further directed

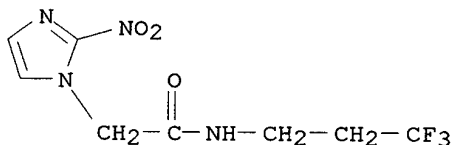
to methods for detecting tissue **hypoxia** using immunohistol. techniques, noninvasive nuclear medicine methods (**PET**, **SPECT**), or NMR. Diagnostic kits useful in practicing the methods of claimed invention are also provided.

IT **180208-73-5P**

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(**hypoxia** detection with 2-nitroimidazole compds. and immunogenic conjugates)

RN 180208-73-5 CAPLUS

CN 1H-Imidazole-1-acetamide, 2-nitro-N-(3,3,3-trifluoropropyl)- (9CI) (CA INDEX NAME)

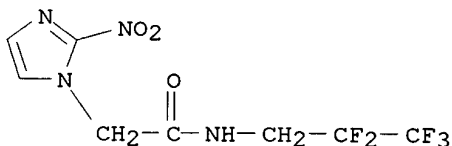


IT **152721-37-4P**

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP (Preparation); USES (Uses)
(**hypoxia** detection with 2-nitroimidazole compds. and immunogenic conjugates)

RN 152721-37-4 CAPLUS

CN 1H-Imidazole-1-acetamide, 2-nitro-N-(2,2,3,3,3-pentafluoropropyl)- (9CI) (CA INDEX NAME)



=> s 15 and protein?

1368354 PROTEIN?

L7 4 L5 AND PROTEIN?

=> d 17 1-4 ibib abs hitstr

L7 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1997:752599 CAPLUS

DOCUMENT NUMBER: 128:70367

TITLE: Bioreductive metabolism of the novel fluorinated
2-nitroimidazole **hypoxia** probe
N-(2-hydroxy-3,3,3-trifluoropropyl)-2-(2-
nitroimidazolyl) acetamide (SR-4554)

AUTHOR(S): Aboagye, Eric O.; Lewis, Alexander D.; Tracy,
Michael;

CORPORATE SOURCE: Workman, Paul
CRC DEPARTMENT OF MEDICAL ONCOLOGY, CLINICAL
PHARMACOLOGY AND NEW DRUG DEVELOPMENT TEAM,

UNIVERSITY

SOURCE: OF GLASGOW, GLASGOW, G61 1BD, UK
Biochem. Pharmacol. (1997), 54(11), 1217-1224

CODEN: BCPA6; ISSN: 0006-2952

PUBLISHER: Elsevier Science Inc.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB The aim of this work was to study the metabolic characteristics of the
novel fluorinated 2-nitroimidazole **hypoxia** probe
N-(2-hydroxy-3,3,3-trifluoropropyl)-2-(2-nitroimidazolyl) acetamide
(SR-4554). HPLC and ¹⁹F NMR methods were employed to evaluate the rate
of
reductive metab. of SR-4554 and the nature of the resulting metabolites,
resp. SR-4554 was enzymically reduced by mouse liver microsomes (1.1

+-.
0.1 nmol of SR-4554 reduced/min/mg **protein**), purified rat and
human NADPH: cytochrome P 450 reductase (17.8 +- 0.4 and 5.0 +- 0.5
nmol of SR-4554 reduced/min/mg **protein**, resp.), and SCCVII tumor
homogenates (2.3 +- 0.3 nmol of SR-4554 reduced/min/g tumor) under
nitrogen. NADPH:cytochrome P 450 reductase was a major microsomal enzyme
involved in the bioedn. of SR-4554 by liver microsomes. In a panel of
murine and human tumor xenografts, cytochrome P 450 reductase activities
were found to be low and only varied by 3-fold between different tumor
types, suggesting that enzyme activities within the tumors are unlikely

to
influence markedly in vivo reductive metab. Redn. of SR-4554 by mouse
liver microsomes showed a characteristic oxygen dependence with a
half-maximal inhibition of 0.48 +- 0.06%. Thus, the reductive metab.

of
SR-4554 can be employed to detect the low oxygen tensions that occur
within both murine and human tumors. Sol., low mol. wt. reductive
metabolites of SR-4554 were identified by ¹⁹F NMR. These metabolite
peaks

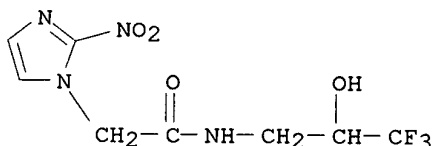
appeared (up to 0.12 ppm) downfield of the parent drug peak. In
conclusion, SR-4554 undergoes an oxygen-dependent metab. that involves
NADPH:cytochrome P 450 reductase. ¹⁹F NMR is capable of identifying
reduced metabolites that are undetectable by HPLC.

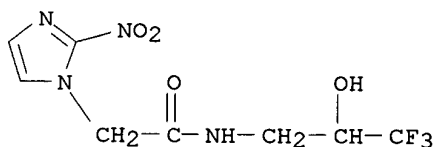
IT 167648-73-9, SR-4554

RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(bioreductive metab. of **hypoxia** probe SR-4554)

RN 167648-73-9 CAPLUS

CN 1H-Imidazole-1-acetamide, 2-nitro-N-(3,3,3-trifluoro-2-hydroxypropyl)-
(9CI) (CA INDEX NAME)





L7 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1996:494670 CAPLUS

DOCUMENT NUMBER: 125:162343

TITLE: Detection of **hypoxia** with reagents containing 2-nitroimidazole compounds and methods of making such reagents

INVENTOR(S): Koch, Cameron J.; Lord, Edith M.

PATENT ASSIGNEE(S): The Trustees of the Univ. of Pennsylvania, USA; The University of Rochester

SOURCE: U.S., 29 pp. Cont.-in-part of U.S. Ser. No. 978,918, abandoned.

CODEN: USXXAM

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 5540908	A	19960730	US 1994-286065	19940804
CA 2149770	AA	19940526	CA 1993-2149770	19931118
US 5843404	A	19981201	US 1996-598752	19960208
PRIORITY APPLN. INFO.:			US 1992-978918	19921119
			US 1994-286065	19940804

OTHER SOURCE(S): MARPAT 125:162343

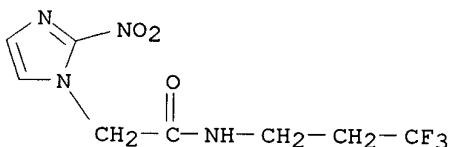
AB Novel nitroarom. compds. and immunogenic conjugates comprising a novel nitroarom. compd. and a carrier **protein** are disclosed. The invention further presents monoclonal antibodies highly specific for the claimed nitroarom. compds., **protein** conjugates of the compds., reductive byproducts of the compds., and adducts formed between the compds. and mammalian hypoxic cell tissue **proteins**. The invention is further directed to methods for detecting tissue **hypoxia** using immunohistol. techniques, noninvasive nuclear medicine methods (PET, SPECT), or NMR. Diagnostic kits useful in practicing the methods of claimed invention are also provided.

IT 180208-73-5P

RL: ARG (Analytical reagent use); SPN (Synthetic preparation); ANST (Analytical study); PREP (Preparation); USES (Uses)
(**hypoxia** detection with 2-nitroimidazole compds. and immunogenic conjugates)

RN 180208-73-5 CAPLUS

CN 1H-Imidazole-1-acetamide, 2-nitro-N-(3,3,3-trifluoropropyl)- (9CI) (CA INDEX NAME)



IT 152721-37-4P

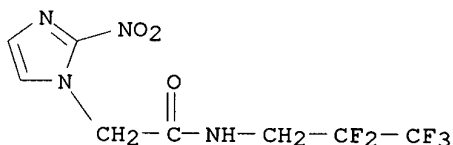
RL: ARG (Analytical reagent use); SPN (Synthetic preparation); THU (Therapeutic use); ANST (Analytical study); BIOL (Biological study); PREP

(Preparation); USES (Uses)

(**hypoxia** detection with 2-nitroimidazole compds. and immunogenic conjugates)

RN 152721-37-4 CAPLUS

CN 1H-Imidazole-1-acetamide, 2-nitro-N-(2,2,3,3,3-pentafluoropropyl)- (9CI)
(CA INDEX NAME)



L7 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2001 ACS

ACCESSION NUMBER: 1994:506516 CAPLUS

DOCUMENT NUMBER: 121:106516

TITLE: Monoclonal antibody to nitroaromatic compound for
hypoxia detection

INVENTOR(S): Koch, Cameron J.; Lord, Edith M.

PATENT ASSIGNEE(S): University of Pennsylvania, USA; University of Rochester

SOURCE: PCT Int. Appl., 51 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9411348	A1	19940526	WO 1993-US11190	19931118
W: CA, JP, LV, UZ				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE				
CA 2149770	AA	19940526	CA 1993-2149770	19931118
EP 669913	A1	19950906	EP 1994-902291	19931118
R: BE, CH, DE, DK, FR, GB, IT, LI				
JP 08503469	T2	19960416	JP 1993-512489	19931118
PRIORITY APPLN. INFO.:				
			US 1992-978918	19921119
			WO 1993-US11190	19931118

OTHER SOURCE(S): MARPAT 121:106516

AB Novel nitroarom. compds. and immunogenic conjugates comprising a novel nitroarom. compd. and a carrier **protein** are disclosed. The invention further presents monoclonal antibodies highly specific for the claimed nitroarom. compds., the compds.' **protein** conjugates, the compds.' reductive byproducts, and adducts formed between the compds. and mammalian hypoxic cell tissue **proteins**. The invention is further directed to methods for detecting tissue **hypoxia** using immunohistol. techniques, non-invasive nuclear medicinal methods, or NMR. Diagnostic kits useful in practicing the methods of claimed invention are also provided.

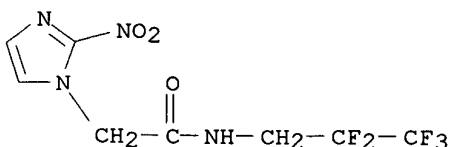
IT **152721-37-4DP**, conjugates with albumin or lysozyme or Bowman-Birk inhibitor

RL: PREP (Preparation)

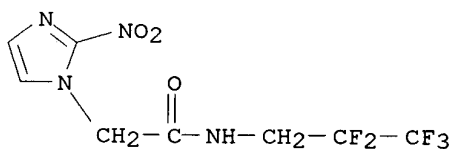
(prepn. of, as immunogen, for raising monoclonal antibody, for **hypoxia** detn.)

RN 152721-37-4 CAPLUS

CN 1H-Imidazole-1-acetamide, 2-nitro-N-(2,2,3,3,3-pentafluoropropyl)- (9CI)
(CA INDEX NAME)

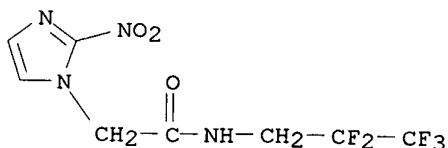


IT 152721-37-4P
 RL: PREP (Preparation)
 (prepn. of, for prepg. immunogen for raising monoclonal antibody for
 hypoxia detn.)
 RN 152721-37-4 CAPLUS
 CN 1H-Imidazole-1-acetamide, 2-nitro-N-(2,2,3,3,3-pentafluoropropyl)- (9CI)
 (CA INDEX NAME)



L7 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2001 ACS
 ACCESSION NUMBER: 1994:101090 CAPLUS
 DOCUMENT NUMBER: 120:101090
 TITLE: Detection of hypoxic cells by monoclonal antibody
 recognizing 2-nitroimidazole adducts
 AUTHOR(S): Lord, Edith M.; Harwell, Lee; Koch, Cameron J.
 CORPORATE SOURCE: Cancer Cent., Univ. Rochester, Rochester, NY, 14642,
 USA
 SOURCE: Cancer Res. (1993), 53(23), 5721-6
 CODEN: CNREA8; ISSN: 0008-5472
 DOCUMENT TYPE: Journal
 LANGUAGE: English
 AB A pentafluorinated deriv. [EF5;
 2-(2-nitro-1H-imidazol-1-yl)-N-(2,2,3,3,3-
 pentafluoropropyl)acetamide] of etanidazole was synthesized with the
 expectation of lessening some of the non-oxygen-dependent variability in
 adduct formation obsd. previously with other nitroarom. compds. EF5-
protein conjugates, prepd. by radiochem. redn., were found to be
 immunogenic and allowed the development of monoclonal antibodies. One of
 these antibodies, ELK2-4, has been characterized and found to be highly
 specific for the EF5 adducts whether produced radiochem. or by cellular
 bioreductive metab. The 9L rat glioma cells pretreated with EF5 under
 hypoxic, compared with aerobic, conditions were readily discriminated
 immunochem. using fluorochrome-conjugated secondary antibodies which
 recognize the ELK2-4 antibody subtype (IgG1). Similarly, the central
 region of multicellular spheroids, composed of EMT6 mouse mammary sarcoma
 cells, was selectively visualized by immunohistochem. after the spheroids
 were incubated for 4 h in 0.5 mM EF5. Tumor biopsy, prepn., and
 immunohistochem. staining 24 h after treatment of tumor-bearing animals
 with drug also demonstrated high contrast regions within EMT6 mouse or
 Morris 7777 hepatoma rat tumors. The use of this new compd. and its
 highly specific monoclonal antibody may allow elucidation of bioreductive
 metab. of the nitroheterocyclics and significantly improve technologies
 for the quantitation of tissue pO2.
 IT 152721-37-4
 RL: ANST (Analytical study)
 (in hypoxic cell detection with monoclonal antibodies)
 RN 152721-37-4 CAPLUS
 CN 1H-Imidazole-1-acetamide, 2-nitro-N-(2,2,3,3,3-pentafluoropropyl)- (9CI)

(CA INDEX NAME)



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CA SUBSCRIBER PRICE	ENTRY	SESSION
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FILE COVERS 1971 TO PATENT PUBLICATION DATE: 6 Feb 2001 (20010206/PD)
FILE LAST UPDATED: 6 Feb 2001 (20010206/ED)
HIGHEST PATENT NUMBER: US6185737
CA INDEXING IS CURRENT THROUGH 6 Feb 2001 (20010206/UPCA)
ISSUE CLASS FIELDS (/INCL) CURRENT THROUGH: 6 Feb 2001 (20010206/PD)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Nov 2000
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Sep 2000

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>>> available for the WIPO International Patent Classification <<<
>>> (IPC) Manuals, editions 1-6, in the /IC1, /IC2, /IC3, /IC4, <<<
>>> /IC5, and /IC (/IC6) fields, respectively. The thesauri in <<<
>>> the /IC5 and /IC fields include the corresponding catchword <<<
>>> terms from the IPC subject headings and subheadings. <<<

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=> s l3 full

L8 11 L3

=> d l8 1-11 ibib abs hitstr

L8 ANSWER 1 OF 11 USPATFULL

ACCESSION NUMBER: 1999:166572 USPATFULL

TITLE: Metal chelating compounds having an SNNN donor set

INVENTOR(S): Archer, Colin Mill, Chesham, United Kingdom
Bower, Gary Robert, Aylesbury, United Kingdom

PATENT ASSIGNEE(S):

Gill, Harjit Kaur, Chesham, United Kingdom
 Riley, Anthony Leonard Mark, Marlow, United Kingdom
 Storey, Anthony Eamon, Amersham, United Kingdom
 Canning, Lewis Reuben, Chesham, United Kingdom
 Griffiths, David Vaughan, Colchester, United Kingdom
 Nycomed Amersham plc, United Kingdom (non-U.S.
 corporation)

	NUMBER	DATE
PATENT INFORMATION:	US 6004531	19991221
APPLICATION INFO.:	US 1997-917476	19970826 (8)
RELATED APPLN. INFO.:	Division of Ser. No. US 1997-888398, filed on 7 Jul 1997 which is a continuation of Ser. No. US 356383	

	NUMBER	DATE
PRIORITY INFORMATION:	EP 1993-302634	19930402
DOCUMENT TYPE:	Utility	
PRIMARY EXAMINER:	Clardy, S. Mark	
ASSISTANT EXAMINER:	Hartley, Michael G.	
LEGAL REPRESENTATIVE:	Wenderoth, Lind & Ponack, L.L.P.	
NUMBER OF CLAIMS:	9	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	10 Drawing Figure(s); 10 Drawing Page(s)	
LINE COUNT:	1544	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Ligands for radiopharmaceutical use are capable of chelating radiometal species and of being bound to biological targeting molecules. The ligands have formula (a) and (b), where A, A' = --SZ or Y, B.dbd.O or S, Y.dbd. (c), Z.dbd.H or a thiol protecting group, m=2 or 3, n=2 or 3,

q=0

or 1, R.dbd.H or unsubstituted or substituted hydrocarbon and pharmaceutically acceptable salts, provided that at least one CR.sub.2 group represents CO and forms, together with an adjacent N atom, a --CONR-- amide group. ##STR1##

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 164213-58-5P

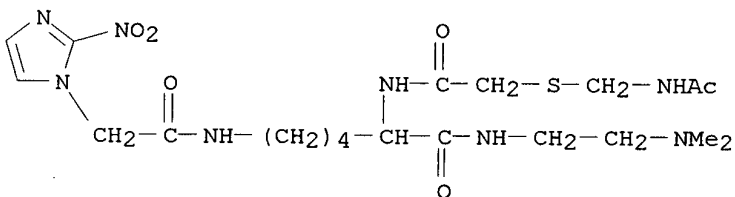
(prepn. of metal chelating compds.)

RN 164213-58-5 USPATFULL

CN 1H-Imidazole-1-acetamide,

N-[5-[[[(acetylamino)methyl]thio]acetyl]amino]-

6-[[2-(dimethylamino)ethyl]amino]-6-oxohexyl]-2-nitro- (9CI) (CA INDEX NAME)



L8 ANSWER 2 OF 11 USPATFULL

ACCESSION NUMBER: 1999:89283 USPATFULL

TITLE: Thioether-containing metal chelating compounds

INVENTOR(S): Archer, Colin Mill, Chesham, United Kingdom
 Bower, Gary Robert, Aylesbury, United Kingdom
 Gill, Harjit Kaur, Chesham, United Kingdom
 Riley, Anthony Leonard Mark, Marlow, United Kingdom
 Storey, Anthony Eamon, Amersham, United Kingdom

PATENT ASSIGNEE(S):

Canning, Lewis Reuben, Chesham, United Kingdom
Griffiths, David Vaughan, Colchester, United Kingdom
Nycomed Amersham plc, United Kingdom (non-U.S.
corporation)

	NUMBER	DATE
PATENT INFORMATION:	US 5932707	19990803
APPLICATION INFO.:	US 1997-888398	19970707 (8)
RELATED APPLN. INFO.:	Continuation of Ser. No. US 356383	

	NUMBER	DATE
PRIORITY INFORMATION:	EP 1993-302634	19930402
DOCUMENT TYPE:	Utility	
PRIMARY EXAMINER:	Dees, Jose G.	
ASSISTANT EXAMINER:	Hartley, Michael G.	
LEGAL REPRESENTATIVE:	Wenderoth, Lind & Ponack, L.L.P.	
NUMBER OF CLAIMS:	12	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	10 Drawing Figure(s); 10 Drawing Page(s)	
LINE COUNT:	1559	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Ligands for radiopharmaceutical use are capable of chelating radiometal species and of being bound to biological targeting molecules. The ligands have the formula (a) and (b), where A, A' = --SZ or Y, B=O or S, Y=(c), Z=H or a thiol protecting group, m=2 or 3, n=2 or 3, q=0 or 1, R=H or unsubstituted or substituted hydrocarbon and pharmaceutically acceptable salts, provided that at least one CR.sub.2 group represents CO and forms, together with an adjacent N atom; a --CONR-- amide group.
##STR1##

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 164213-58-5p

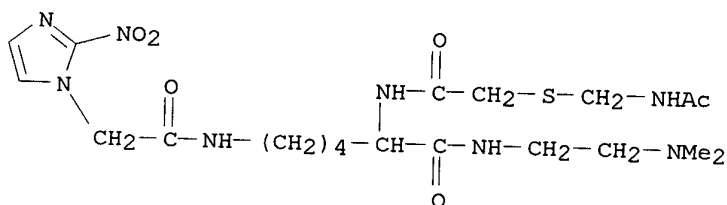
(prepn. of metal chelating compds.)

RN 164213-58-5 USPATFULL

CN 1H-Imidazole-1-acetamide,

N-[5-[[[(acetylamino)methyl]thio]acetyl]amino]-

6-[[2-(dimethylamino)ethyl]amino]-6-oxohexyl]-2-nitro- (9CI) (CA INDEX NAME)



L8 ANSWER 3 OF 11 USPATFULL

ACCESSION NUMBER: 1998:150428 USPATFULL

TITLE: Detection of hypoxia

INVENTOR(S): Koch, Cameron J., Phila., PA, United States
Lord, Edith M., Rochester, NY, United States

PATENT ASSIGNEE(S): Trustees of the University of Pennsylvania,
Philadelphia, PA, United States (U.S. corporation)
Trustees of the University of Rochester, Rochester,
NY,

United States (U.S. corporation)

NUMBER	DATE

PATENT INFORMATION: US 5843404 19981201
APPLICATION INFO.: US 1996-598752 19960208 (8)
RELATED APPLN. INFO.: Division of Ser. No. US 1994-286065, filed on 4 Aug 1994, now patented, Pat. No. US 5540908 which is a continuation-in-part of Ser. No. US 1992-978918, filed on 19 Nov 1992, now abandoned
DOCUMENT TYPE: Utility
PRIMARY EXAMINER: Achutamurth, Ponnathamurthy
LEGAL REPRESENTATIVE: Woodcock Washburn Kurtz Mackiewicz & Norris LLP
NUMBER OF CLAIMS: 15
EXEMPLARY CLAIM: 1,9
NUMBER OF DRAWINGS: 18 Drawing Figure(s); 15 Drawing Page(s)
LINE COUNT: 1430

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Novel nitroaromatic compounds and immunogenic conjugates comprising a novel nitroaromatic compound and a carrier protein are disclosed. The invention further presents monoclonal antibodies highly specific for the

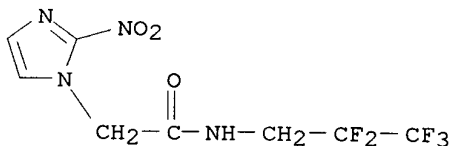
claimed nitroaromatic compounds, the compounds' protein conjugates, the compounds' reductive byproducts, and adducts formed between the compounds and mammalian hypoxic cell tissue proteins. The invention is further directed to methods for detecting tissue hypoxia using immunohistological techniques, non-invasive nuclear medicinal methods, or nuclear magnetic resonance. Diagnostic kits useful in practicing the methods of claimed invention are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 152721-37-4DP, conjugates with albumin or lysozyme or Bowman-Birk inhibitor (prepn. of, as immunogen, for raising monoclonal antibody, for hypoxia detn.)

RN 152721-37-4 USPATFULL

CN 1H-Imidazole-1-acetamide, 2-nitro-N-(2,2,3,3,3-pentafluoropropyl)- (9CI)
(CA INDEX NAME)

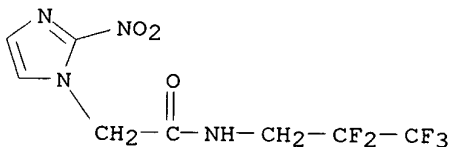


IT 152721-37-4P

(prepn. of, for prepg. immunogen for raising monoclonal antibody for hypoxia detn.)

RN 152721-37-4 USPATFULL

CN 1H-Imidazole-1-acetamide, 2-nitro-N-(2,2,3,3,3-pentafluoropropyl)- (9CI)
(CA INDEX NAME)



L8 ANSWER 4 OF 11 USPATFULL

ACCESSION NUMBER: 1998:42477 USPATFULL

TITLE: Methods for preparing heteroatom-bearing ligands and metal complexes thereof

INVENTOR(S): Ramalingam, Kondareddiar, Dayton, NJ, United States
 Raju, Natarajan, Kendall Park, NJ, United States
 PATENT ASSIGNEE(S): Bracco International B.V., Amsterdam, United States
 (non-U.S. corporation)

	NUMBER	DATE
PATENT INFORMATION:	US 5741912	19980421
APPLICATION INFO.:	US 1995-479076	19950606 (8)
RELATED APPLN. INFO.:	Division of Ser. No. US 1994-242093, filed on 18 May 1994, now patented, Pat. No. US 5608110 which is a continuation-in-part of Ser. No. US 1993-77981, filed on 15 Jun 1993, now abandoned	
DOCUMENT TYPE:	Utility	
PRIMARY EXAMINER:	Hollinden, Gary E.	
ASSISTANT EXAMINER:	Hartley, Michael G.	
LEGAL REPRESENTATIVE:	Hoare, George P.; Rhoads, Donald L.	
NUMBER OF CLAIMS:	6	
EXEMPLARY CLAIM:	1	
LINE COUNT:	3388	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Novel compounds containing a heteroatom-bearing bridge and novel complexes of these compounds with metals. The novel compounds and complexes are useful in diagnostic and therapeutic methods.

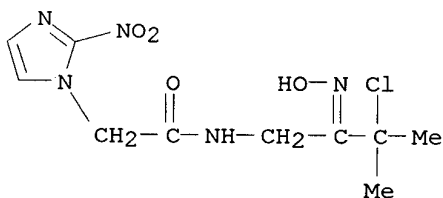
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 161490-39-7P 161490-40-0P 161490-41-1P

(for prepn. of technetium triaza or oxadiazia dioxime complexes)

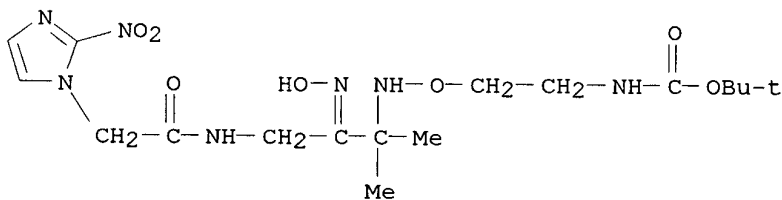
RN 161490-39-7 USPATFULL

CN 1H-Imidazole-1-acetamide, N-[3-chloro-2-(hydroxyimino)-3-methylbutyl]-2-nitro- (9CI) (CA INDEX NAME)



RN 161490-40-0 USPATFULL

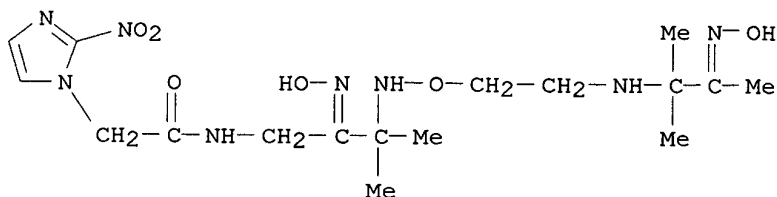
CN 5-Oxa-2,6,10-triazadodecanoic acid, 8-(hydroxyimino)-7,7-dimethyl-12-(2-nitro-1H-imidazol-1-yl)-11-oxo-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 161490-41-1 USPATFULL

CN 1H-Imidazole-1-acetamide,

N-[2-(hydroxyimino)-3-[[2-[[2-(hydroxyimino)-1,1-dimethylpropyl]amino]ethoxy]amino]-3-methylbutyl]-2-nitro- (9CI) (CA INDEX NAME)



L8 ANSWER 5 OF 11 USPATFULL

ACCESSION NUMBER: 1998:19731 USPATFULL

TITLE: Fluorinated 2-nitroimidazole analogs for detecting hypoxic tumor cells

INVENTOR(S): Tracy, Michael, Palo Alto, CA, United States
Kelson, Andrew B., San Carlos, CA, United States
Workman, Paul, Wilmslow, England
Lewis, Alexander D., Bearsden, Scotland
Aboagye, Eric O., Bearsden, Scotland

PATENT ASSIGNEE(S): SRI International, Menlo Park, CA, United States (U.S. corporation)

	NUMBER	DATE
PATENT INFORMATION:	US 5721265	19980224
APPLICATION INFO.:	US 1995-458178	19950602 (8)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1994-286477, filed on 5 Aug 1994, now abandoned	
DOCUMENT TYPE:	Utility	
PRIMARY EXAMINER:	Higel, Floyd D.	
LEGAL REPRESENTATIVE:	Reed, Dianne E.Bozicevic & Reed LLP	
NUMBER OF CLAIMS:	47	
EXEMPLARY CLAIM:	1,38	
NUMBER OF DRAWINGS:	10 Drawing Figure(s); 8 Drawing Page(s)	
LINE COUNT:	1317	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Agents useful for detecting hypoxic tumor cells are provided. The compounds have the structural formula (I) ##STR1## Methods of using the compounds to detect hypoxic tumor cells are also provided, as are pharmaceutical compositions formulated with the novel compounds.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

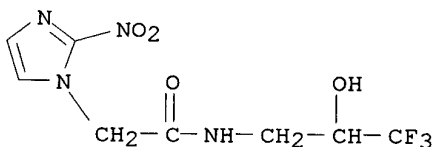
IT 167648-73-9P 177595-17-4P 177595-20-9P

177595-21-0P 177595-22-1P 203452-63-5P

(prepn. of fluorinated nitroimidazole analogs for detecting hypoxic tumor cells)

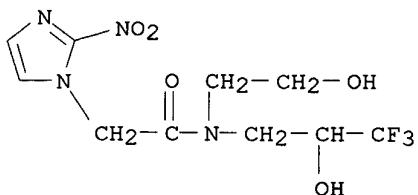
RN 167648-73-9 USPATFULL

CN 1H-Imidazole-1-acetamide, 2-nitro-N-(3,3,3-trifluoro-2-hydroxypropyl)-(9CI) (CA INDEX NAME)

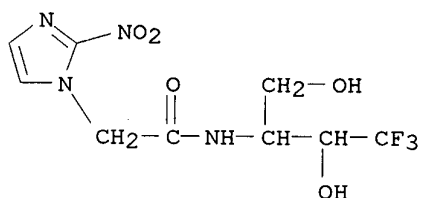


RN 177595-17-4 USPATFULL

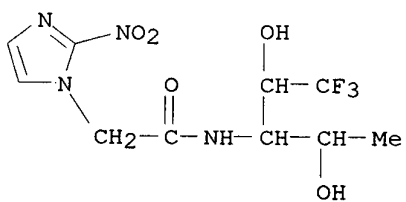
CN 1H-Imidazole-1-acetamide,
N-(2-hydroxyethyl)-2-nitro-N-(3,3,3-trifluoro-2-hydroxypropyl)-(9CI) (CA INDEX NAME)



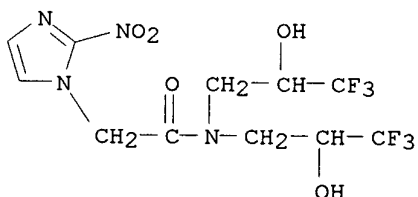
RN 177595-20-9 USPATFULL
 CN 1H-Imidazole-1-acetamide, 2-nitro-N-[3,3,3-trifluoro-2-hydroxy-1-(hydroxymethyl)propyl]- (9CI) (CA INDEX NAME)



RN 177595-21-0 USPATFULL
 CN 1H-Imidazole-1-acetamide, 2-nitro-N-[3,3,3-trifluoro-2-hydroxy-1-(1-hydroxyethyl)propyl]- (9CI) (CA INDEX NAME)

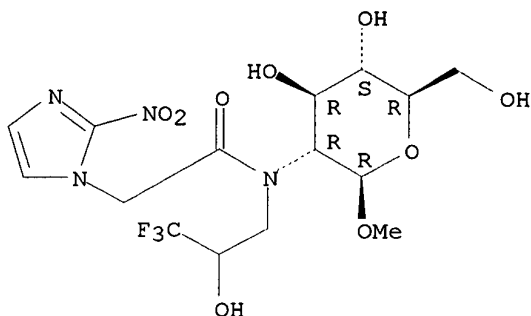


RN 177595-22-1 USPATFULL
 CN 1H-Imidazole-1-acetamide, 2-nitro-N,N-bis(3,3,3-trifluoro-2-hydroxypropyl)- (9CI) (CA INDEX NAME)



RN 203452-63-5 USPATFULL
 CN .beta.-D-Glucopyranoside, methyl 2-deoxy-2-[[[(2-nitro-1H-imidazol-1-yl)acetyl](3,3,3-trifluoro-2-hydroxypropyl)amino]- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



L8 ANSWER 6 OF 11 USPATFULL

ACCESSION NUMBER: 97:80883 USPATFULL

TITLE: Heteroatom-bearing ligands and metal complexes thereof

INVENTOR(S): Ramalingam, Kondareddiar, Dayton, NJ, United States
Raju, Natarajan, Kendall Park, NJ, United States

PATENT ASSIGNEE(S): Bracco International B.V., Amsterdam, United States
(non-U.S. corporation)

	NUMBER	DATE
PATENT INFORMATION:	US 5665329	19970909
APPLICATION INFO.:	US 1995-480048	19950606 (8)
RELATED APPLN. INFO.:	Division of Ser. No. US 1994-242093, filed on 18 May 1994 which is a continuation-in-part of Ser. No. US 1993-77981, filed on 15 Jun 1993, now abandoned	
DOCUMENT TYPE:	Utility	
PRIMARY EXAMINER:	Hollinden, Gary E.	
ASSISTANT EXAMINER:	Hartley, Michael G.	
LEGAL REPRESENTATIVE:	Hoare, George P.; Rhoads, Donald L.	
NUMBER OF CLAIMS:	7	
EXEMPLARY CLAIM:	1	
LINE COUNT:	3429	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		
AB	Novel compounds containing a heteroatom-bearing bridge and novel complexes of these compounds with metals. The novel compounds and complexes are useful in diagnostic and therapeutic methods.	

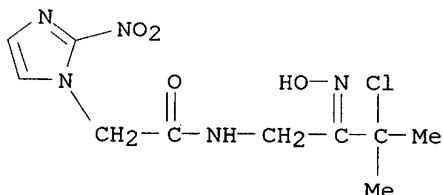
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 161490-39-7P 161490-40-0P 161490-41-1P

(for prepn. of technetium triaza or oxadiazia dioxime complexes)

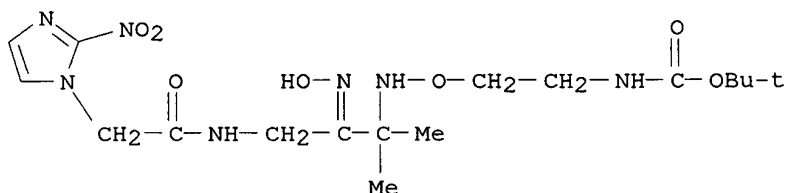
RN 161490-39-7 USPATFULL

CN 1H-Imidazole-1-acetamide, N-[3-chloro-2-(hydroxyimino)-3-methylbutyl]-2-nitro- (9CI) (CA INDEX NAME)

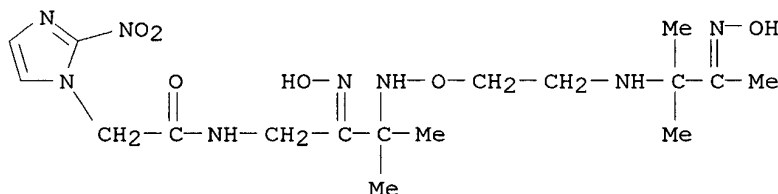


RN 161490-40-0 USPATFULL

CN 5-Oxa-2,6,10-triazadodecanoic acid, 8-(hydroxyimino)-7,7-dimethyl-12-(2-nitro-1H-imidazol-1-yl)-11-oxo-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 161490-41-1 USPATFULL
 CN 1H-Imidazole-1-acetamide,
 N-[2-(hydroxyimino)-3-[[2-[[2-(hydroxyimino)-1,1-
 dimethylpropyl]amino]ethoxy]amino]-3-methylbutyl]-2-nitro- (9CI) (CA
 INDEX NAME)



L8 ANSWER 7 OF 11 USPATFULL
 ACCESSION NUMBER: 97:70702 USPATFULL
 TITLE: Polyaza heteroatom-bearing ligands and metal complexes
 thereof for imaging or radiotherapy
 INVENTOR(S): Ramalingam, Kondareddiar, Dayton, NJ, United States
 Raju, Natarajan, Kendall Park, NJ, United States
 PATENT ASSIGNEE(S): Bracco International B.V., Amsterdam, United States
 (non-U.S. corporation)

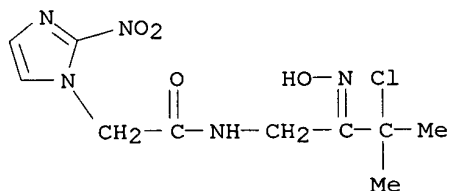
	NUMBER	DATE
PATENT INFORMATION:	US 5656254	19970812
APPLICATION INFO.:	US 1995-471590	19950606 (8)
RELATED APPLN. INFO.:	Division of Ser. No. US 1994-242093, filed on 18 May 1994 which is a continuation-in-part of Ser. No. US 1993-77981, filed on 15 Jun 1993, now abandoned	
DOCUMENT TYPE:	Utility	
PRIMARY EXAMINER:	Hollinden, Gary E.	
ASSISTANT EXAMINER:	Hartley, Michael G.	
LEGAL REPRESENTATIVE:	Hoare, George P.; Rhoads, Donald L.	
NUMBER OF CLAIMS:	16	
EXEMPLARY CLAIM:	1	
LINE COUNT:	3551	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Novel compounds containing a heteroatom-bearing bridge and novel complexes of these compounds with metals. The novel compounds and complexes are useful in diagnostic and therapeutic methods.

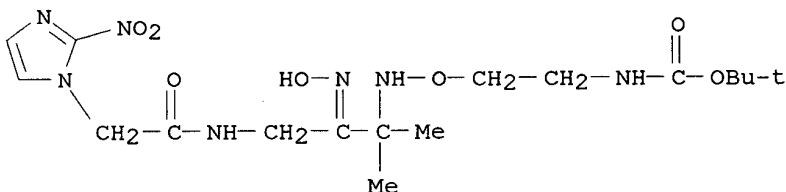
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 161490-39-7P 161490-40-0P 161490-41-1P
 (for prepn. of technetium triaza or oxadiazia dioxime complexes)
 RN 161490-39-7 USPATFULL
 CN 1H-Imidazole-1-acetamide, N-[3-chloro-2-(hydroxyimino)-3-methylbutyl]-2-nitro- (9CI) (CA INDEX NAME)



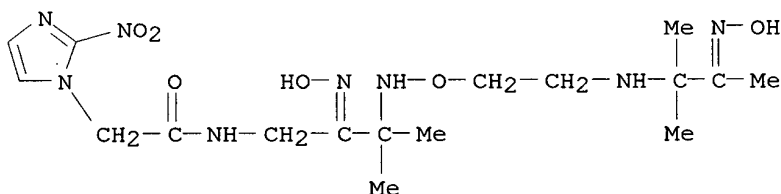
RN 161490-40-0 USPATFULL

CN 5-Oxa-2,6,10-triazadodecanoic acid, 8-(hydroxyimino)-7,7-dimethyl-12-(2-nitro-1H-imidazol-1-yl)-11-oxo-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



RN 161490-41-1 USPATFULL

CN 1H-Imidazole-1-acetamide, N-[2-(hydroxyimino)-3-[[2-[[2-(hydroxyimino)-1,1-dimethylpropyl]amino]ethoxy]amino]-3-methylbutyl]-2-nitro- (9CI) (CA INDEX NAME)



L8 ANSWER 8 OF 11 USPATFULL

ACCESSION NUMBER: 97:38628 USPATFULL

TITLE: Heteroatom-bearing ligands and metal complexes thereof

INVENTOR(S): Ramalingam, Kondareddiar, Dayton, NJ, United States

Raju, Natarajan, Kendall Park, NJ, United States

PATENT ASSIGNEE(S): Bracco International B.V., Amsterdam, United States (non-U.S. corporation)

	NUMBER	DATE
PATENT INFORMATION:	US 5627286	19970506
APPLICATION INFO.:	US 1995-472058	19950606 (8)
RELATED APPLN. INFO.:	Division of Ser. No. US 1994-242093, filed on 18 May 1994 which is a continuation-in-part of Ser. No. US 1993-77981, filed on 15 Jun 1993, now abandoned	
DOCUMENT TYPE:	Utility	
PRIMARY EXAMINER:	Hollinden, Gary E.	
ASSISTANT EXAMINER:	Hartley, Michael G.	
LEGAL REPRESENTATIVE:	Hoare, George P.; Rhoads, Donald L.	
NUMBER OF CLAIMS:	12	
EXEMPLARY CLAIM:	1	
LINE COUNT:	3404	
CAS INDEXING IS AVAILABLE FOR THIS PATENT.		
AB	Novel compounds containing a heteroatom-bearing bridge and novel	

	NUMBER	DATE
PATENT INFORMATION:	US 5608110	19970304
APPLICATION INFO.:	US 1994-242093	19940518 (8)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1993-77981, filed	

on 15 Jun 1993, now abandoned
 DOCUMENT TYPE: Utility
 PRIMARY EXAMINER: Hollinden, Gary E.
 ASSISTANT EXAMINER: Hartley, Michael G.
 LEGAL REPRESENTATIVE: Hoare, George P.; Rhoads, Donald L.
 NUMBER OF CLAIMS: 6
 EXEMPLARY CLAIM: 1
 LINE COUNT: 3349

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Novel compounds containing a heteroatom-bearing bridge and novel complexes of these compounds with metals. The novel compounds and complexes are useful in diagnostic and therapeutic methods.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

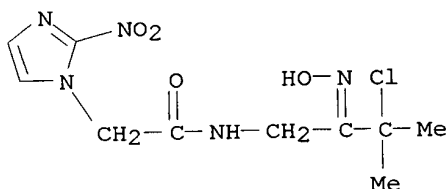
IT 161490-39-7P 161490-40-0P 161490-41-1P

187847-72-9P

(prepn. of heteroatom-bearing bridged amine oxime ligands, analogs, and their metal complexes for use in diagnostic or therapeutic methods)

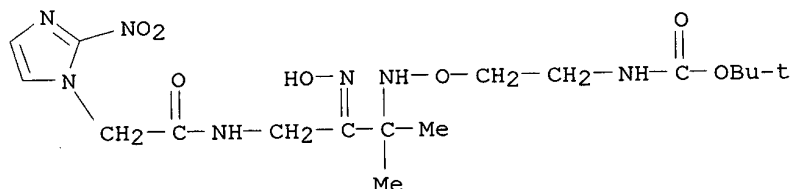
RN 161490-39-7 USPATFULL

CN 1H-Imidazole-1-acetamide, N-[3-chloro-2-(hydroxyimino)-3-methylbutyl]-2-nitro- (9CI) (CA INDEX NAME)



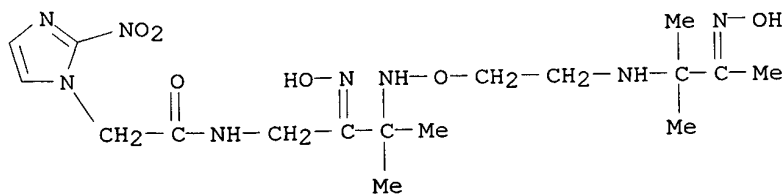
RN 161490-40-0 USPATFULL

CN 5-Oxa-2,6,10-triazadodecanoic acid, 8-(hydroxyimino)-7,7-dimethyl-12-(2-nitro-1H-imidazol-1-yl)-11-oxo-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



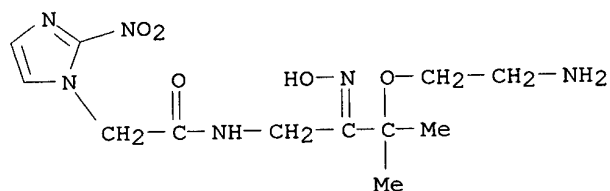
RN 161490-41-1 USPATFULL

CN 1H-Imidazole-1-acetamide, N-[2-(hydroxyimino)-3-[[2-[[2-(hydroxyimino)-1,1-dimethylpropyl]amino]ethoxy]amino]-3-methylbutyl]-2-nitro- (9CI) (CA INDEX NAME)



RN 187847-72-9 USPATFULL

CN 1H-Imidazole-1-acetamide, N-[3-(2-aminoethoxy)-2-(hydroxyimino)-3-methylbutyl]-2-nitro- (9CI) (CA INDEX NAME)



L8 ANSWER 10 OF 11 USPATFULL

ACCESSION NUMBER: 96:67732 USPATFULL

TITLE: Detection of hypoxia with reagents containing 2-nitroimidazole compounds and methods of making such reagents

INVENTOR(S): Koch, Cameron J., Philadelphia, PA, United States
Lord, Edith M., Rochester, NY, United States

PATENT ASSIGNEE(S): The Trustees of the Univ. of Pennsylvania,
Philadelphia, PA, United States (U.S. corporation)
The University of Rochester, Rochester, NY, United States (U.S. corporation)

	NUMBER	DATE
PATENT INFORMATION:	US 5540908	19960730
APPLICATION INFO.:	US 1994-286065	19940804 (8)
RELATED APPLN. INFO.:	Continuation-in-part of Ser. No. US 1992-978918, filed on 19 Nov 1992, now abandoned	
DOCUMENT TYPE:	Utility	
PRIMARY EXAMINER:	Kim, Kay K. A.	
LEGAL REPRESENTATIVE:	Woodcock Washburn Kurtz Mackiewicz & Norris	
NUMBER OF CLAIMS:	31	
EXEMPLARY CLAIM:	1	
NUMBER OF DRAWINGS:	18 Drawing Figure(s); 15 Drawing Page(s)	
LINE COUNT:	1458	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Novel nitroaromatic compounds and immunogenic conjugates comprising a novel nitroaromatic compound and a carrier protein are disclosed. The invention further presents monoclonal antibodies highly specific for

the claimed nitroaromatic compounds, the compounds' protein conjugates, the compounds' reductive byproducts, and adducts formed between the compounds and mammalian hypoxic cell tissue proteins. The invention is further directed to methods for detecting tissue hypoxia using immunohistological techniques, non-invasive nuclear medicinal methods, or nuclear magnetic resonance. Diagnostic kits useful in practicing the methods of claimed invention are also provided.

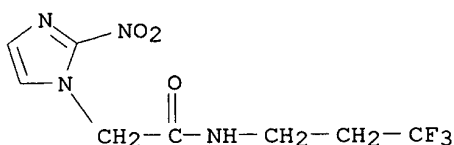
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 180208-73-5P

(hypoxia detection with 2-nitroimidazole compds. and immunogenic conjugates)

RN 180208-73-5 USPATFULL

CN 1H-Imidazole-1-acetamide, 2-nitro-N-(3,3,3-trifluoropropyl)- (9CI) (CA INDEX NAME)

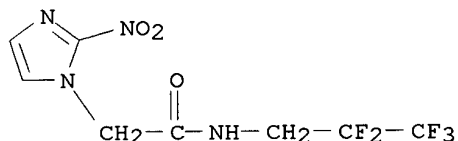


IT 152721-37-4P

(hypoxia detection with 2-nitroimidazole compds. and immunogenic conjugates)

RN 152721-37-4 USPATFULL

CN 1H-Imidazole-1-acetamide, 2-nitro-N-(2,2,3,3,3-pentafluoropropyl)- (9CI)
(CA INDEX NAME)



L8 ANSWER 11 OF 11 USPATFULL

ACCESSION NUMBER: 90:95206 USPATFULL

TITLE: Fluorine-containing 2-nitroimidazole derivatives

INVENTOR(S): Kagiya, Tsutomu, Kyoto, Japan

Abe, Mitsuyuki, Kyoto, Japan

Nishimoto, Seiichi, Nara, Japan

Shibamoto, Yuta, Kyoto, Japan

Otomo, Susumu, Kounosu, Japan

Tanami, Tohru, Tokyo, Japan

Shimokawa, Kazuhiro, Settsu, Japan

Yoshizawa, Toru, Osaka, Japan

Hisanaga, Yorisato, Ibaraki, Japan

PATENT ASSIGNEE(S): Kyoto University of Honmachi, Kyoto, Japan (non-U.S. corporation)

Taisho Pharmaceutical Co., Ltd., Tokyo, Japan

(non-U.S.

corporation)

Daikin Industries, Ltd., Osaka, Japan (non-U.S. corporation)

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EXEMPLARY CLAIM:	1	
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LINE COUNT:	609	

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A 2-nitroimidazole derivative of the formula: ##STR1## wherein R.sub.f is a group of the following formula (II) or (III):

--CH.sub.2 CFXCH.sub.2 OR.sub.1

(II)

wherein X is a hydrogen atom or a halogen atom; R.sub.1 is a group of the formula: ##STR2## wherein R.sub.2 is a hydrogen atom, a hydroxyl group, a C.sub.1 -C.sub.3 alkyl group, a C.sub.2 -C.sub.4 acyl group, benzylidene or acetonide; R.sub.3 is a hydrogen atom or a C.sub.1 -C.sub.3 alkyl group; Z is a hydrogen atom, COOY, COOR.sub.3, CONHOY, CONR.sub.4 R.sub.5 (wherein R.sub.4 and R.sub.5 are hydroxyl group-containing C.sub.1 -C.sub.3 alkyl groups or hydrogen atoms; Y is

a

hydrogen atom or a monovalent metal atom), an amino group, a hydroxyl group or OR.sub.3 ; l is an integer of 1 to 3; o is an integer of 0 to 3; p is an integer of 0 to 2; q is an integer of 0 to 3; m and n are integers of 0 to 4; and 1.ltoreq.m+n.ltoreq.4 or ##STR3## wherein R.sub.3, X and p are the same as defined above; Z' is the same as Z or is OCOOCH.sub.3 ; r is an integer of 1 to 3; s is 0 or 1; t is an integer of 0 to 4 provided that when p=0, s.noteq.0 and at least one X is a fluorine atom; and a radiosensitizer comprising said

nitroimidazole

derivative.

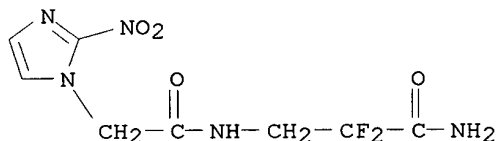
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 130777-35-4P

(prepn. of, as radiosensitizer)

RN 130777-35-4 USPATFULL

CN 1H-Imidazole-1-acetamide, N-(3-amino-2,2-difluoro-3-oxopropyl)-2-nitro-
(9CI) (CA INDEX NAME)



=>

=> save hypoxia/1

ENTER L#, L# RANGE, ALL, OR (END):all

L# LIST L1-L8 HAS BEEN SAVED AS 'HYPOXIA/L'

=>

---Logging off of STN---

=>

Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

55.22

224.55

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE

TOTAL

ENTRY

SESSION

CA SUBSCRIBER PRICE

0.00

-4.12

STN INTERNATIONAL LOGOFF AT 10:13:46 ON 07 FEB 2001